AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-16. (Cancelled)

17. (Currently Amended) A method of aggregating a plurality of recognition results comprising the steps of:

receiving a segmented target object and at least one transform of the segmented target object;

performing at least one pattern recognition algorithm on the segmented target object and the at least one transform to generate a plurality of recognition results;

aggregating the plurality of recognition results to determine a recognition decision; and

outputting the recognition decision,

~~The method of claim 16,~~ wherein aggregating the plurality of recognition results is according to an equation:

$G_i(S_k(F_o(x)), ..., S_k(F_N(x))) = \max S_k(F_n(x))$ from 0 to N, wherein:

x denotes a segmented pattern in the segmented target object with N number of transforms performed, where n is $1 \leq n \leq N$;

k denotes a pattern class;

$F_N(x)$ denotes an extracted feature of an Nth transformed image, where $F_o(x)$ is an extracted feature of an original input pattern x;

$S_k(F_o(x))$ denotes a probability that $F_o(x)$ belongs to a class k; and

$G_i(S_k(F_o(x)), ..., S_k(F_N(x)))$ is an aggregation rule function indicating a possibility that $S_k(F_o(x)), ..., S_k(F_N(x))$ belongs to a class.

18. (Currently Amended) A method of aggregating a plurality of recognition results comprising the steps of:

receiving a segmented target object and at least one transform of the segmented target object;

performing at least one pattern recognition algorithm on the segmented target object and the at least one transform to generate a plurality of recognition results;

aggregating the plurality of recognition results to determine a recognition decision; and

outputting the recognition decision,

~~The method of claim 16,~~ wherein aggregating the plurality of recognition results is according to an equation:

$G_i(S_k(F_o(x)), ..., S_k(F_N(x))) = (1/N) \Sigma S_k(F_n(x))$ from n = 0 to N, wherein:

x denotes a segmented pattern in the segmented target object with N number of transforms performed, where n is $1 \leq n \leq N$;

k denotes a pattern class;

$F_N(x)$ denotes an extracted feature of an Nth transformed image, where $F_o(x)$ is an extracted feature of an original input pattern x;

$S_k(F_o(x))$ denotes a probability that $F_o(x)$ belongs to a class k; and

$G_i(S_k(F_o(x)), ..., S_k(F_N(x)))$ is an aggregation rule function indicating a possibility that $S_k(F_o(x)), ..., S_k(F_N(x))$ belongs to a class.

19. (Currently Amended) A method of aggregating a plurality of recognition results comprising the steps of:

receiving a segmented target object and at least one transform of the segmented target object;

performing at least one pattern recognition algorithm on the segmented target object and the at least one transform to generate a plurality of recognition results;

aggregating the plurality of recognition results to determine a recognition decision; and

outputting the recognition decision,

~~The method according to claim 16,~~ wherein determining the recognition decision is according to an equation:

$$D(x) = j, \text{ if } G_j(S_j(F_o(x)), ..., S_j(F_N(x))) = \arg\max_{1 \le k \le K} G_k(S_k(F_o(x)), ..., S_k(F_n(x))),$$

wherein:

D denotes a decision rule function;

G is an aggregation rule function;

x denotes a segmented pattern in the segmented target object with N number of transforms performed, where n is $1 \le n \le N$;

j denotes a matching object;

k denotes a pattern class;

$F_N(x)$ denotes an extracted feature of an Nth transformed image, where $F_o(x)$ is an extracted feature of an original input pattern x; and

$S_k(F_o(x))$ denotes a probability that $F_o(x)$ belongs to a class k.

20. (Cancelled)

21. (Currently Amended) The method of claim [[16]] 17, wherein the performing step includes performing in parallel a plurality of substantially identical recognition algorithms.

22. (Cancelled)

23. (Currently Amended) The system of claim [[22]] 27, wherein: the at least one transform module is a rotation transformer.

24. (Currently Amended) The system of claim [[22]] 27, wherein: the at least one transform module is a boundary shift transformer.

25. (Cancelled)

26. (Currently Amended) The system of claim [[22]] 27, wherein: a plurality of substantially identical pattern recognizers operating in parallel generate the plurality of recognition results.

27. (Currently Amended) A pattern recognition system comprising:

an input to receive an input object;

an object detector to detect a target object within the input object;

at least one transform module to perform at least one transform on the target object to form a plurality of transformed objects;

at least one pattern recognizer for generating a plurality of recognition results based on the target image and the plurality of transformed objects; and

a recognition result aggregator for determining a recognition decision based on the plurality of recognition results,

~~The system of claim 22,~~ wherein the recognition result aggregator aggregates the plurality of recognition results according to an equation:

$G_i(S_k(F_o(x)), ..., S_k(F_N(x))) = \max S_k(F_n(x))$ from 0 to N, wherein:

x denotes a segmented pattern in the segmented target object with N number of transforms performed, where n is $1 \leq n \leq N$;

k denotes a pattern class;

$F_N(x)$ denotes an extracted feature of an Nth transformed image, where $F_o(x)$ is an extracted feature of an original input pattern x;

$S_k(F_o(x))$ denotes a probability that $F_o(x)$ belongs to a class k; and

$G_i(S_k(F_o(x)), ..., S_k(F_N(x)))$ is an aggregation rule function indicating a possibility that $S_k(F_o(x)), ..., S_k(F_N(x))$ belongs to a class.

28. (Currently Amended) A pattern recognition system comprising:

an input to receive an input object;

an object detector to detect a target object within the input object;

at least one transform module to perform at least one transform on the target object to form a plurality of transformed objects;

at least one pattern recognizer for generating a plurality of recognition results based on the target image and the plurality of transformed objects; and

a recognition result aggregator for determining a recognition decision based on the plurality of recognition results,

~~The system of claim 22,~~ wherein the recognition result aggregator aggregates the plurality of recognition results according to an equation:

$G_i(S_k(F_o(x)), ..., S_k(F_N(x))) = (1/N) \Sigma S_k(F_n(x))$ from n = 0 to N, wherein:

x denotes a segmented pattern in the segmented target object with N number of transforms performed, where n is $1 \leq n \leq N$;

k denotes a pattern class;

$F_N(x)$ denotes an extracted feature of an Nth transformed image, where $F_o(x)$ is an extracted feature of an original input pattern x;

$S_k(F_o(x))$ denotes a probability that $F_o(x)$ belongs to a class k; and

$G_i(S_k(F_o(x)), ..., S_k(F_N(x)))$ is an aggregation rule function indicating a possibility that $S_k(F_o(x)), ..., S_k(F_N(x))$ belongs to a class.

29. (Currently Amended) A pattern recognition system comprising:

an input to receive an input object;

an object detector to detect a target object within the input object;

at least one transform module to perform at least one transform on the target object to form a plurality of transformed objects;

at least one pattern recognizer for generating a plurality of recognition results based on the target image and the plurality of transformed objects; and

a recognition result aggregator for determining a recognition decision based on the plurality of recognition results,

~~The system of claim 22,~~ wherein the recognition result aggregator determines the recognition decision according to an equation:

$$D(x) = j, \text{ if } G_j(S_j(F_o(x)), ..., S_j(F_N(x))) = \arg\max_{1 \le k \le K} G_k(S_k(F_o(x)), ..., S_k(F_n(x))),$$

wherein:

D denotes a decision rule function;

G is an aggregation rule function;

x denotes a segmented pattern in the segmented target object with N number of transforms performed, where n is $1 \le n \le N$;

j denotes a matching object;

k denotes a pattern class;

$F_N(x)$ denotes an extracted feature of an Nth transformed image, where $F_o(x)$ is an extracted feature of an original input pattern x; and

$S_k(F_o(x))$ denotes a probability that $F_o(x)$ belongs to a class k.

30-37. (Cancelled)